



Jan

DAC

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR: Pearce
TITLE: Elastomer Materials with Reduced Bleed and Related Devices
FILING DATE: February 20, 2004
SERIAL NO.: 10/784,136
PATENT NO.: n/a
PUBLICATION NO.: US2004/0229986

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Petition to Expunge

Honorable Commissioner:

This paper is a Petition to Expunge material from the case listed above. The material to be expunged is identified below. The material should be expunged from any and all of (a) the prosecution history, (b) the published patent application, and (c) any patent which may issue therefrom. Expungement is appropriate because the material in question has been found by the OED to be a violation of MPEP 608.01(r).

MATERIAL TO BE EXPUNGED:

In paragraph [0418] of the specification of the published application (no. US2004/0226099), please expunge the following language:

"The elongation at break value was mysteriously omitted from Table I of the '334 patent and other Chen patents. However, reference to Table I of Chen's first two issued patents (the '284 and '213 patents) sets the percent elongation of Chen's 4:1 material at about 1700. Applicant suspects that Chen omitted this data in later patent applications because it was either

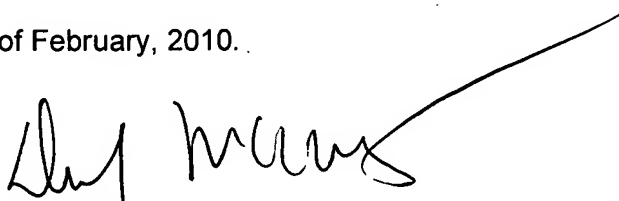
inaccurate or Chen's improved materials failed to exhibit improved properties over his earlier materials."

REMARKS

The undersigned submitted the above-identified case to the Office. Presently the undersigned is NOT counsel of record in the case and does NOT represent the owner of the case. However, the undersigned has been requested by the OED to pursue removal of the material in order to bring the case into compliance with MPEP 608.01(r). Accordingly, the undersigned respectfully petitions the Office to expunge the identified material.

Prompt consideration of this petition is respectfully requested.

Respectfully submitted this 24 day of February, 2010.

A handwritten signature in black ink, appearing to read "Daniel P. McCarthy", with a long horizontal flourish extending to the right.

Daniel P. McCarthy
Reg. No. 36,600
2053 Pinetree Village
Brighton, Utah 84121
Land line: 435 655 8998
Mobile: 801 661 8998
Fax: 435 615 9669
Email: danielmccarthy@xmission.com

cc: Ronald K. Jaicks, Esq.
Office of the Solicitor



US 20040229986A1

(19) **United States**(12) **Patent Application Publication**
Pearce(10) **Pub. No.: US 2004/0229986 A1**(43) **Pub. Date: Nov. 18, 2004**(54) **ELASTOMER MATERIALS WITH REDUCED
BLEED AND RELATED DEVICES**(76) **Inventor: Tony M. Pearce, Alpine, UT (US)**

Correspondence Address:
Parsons Behle & Latimer
Suite 1800
201 South Main Street
P.O. Box 45898
Salt Lake City, UT 84111 (US)

6,173,575, which is a continuation-in-part of application No. 08/968,750, filed on Aug. 13, 1997, now Pat. No. 6,026,527, which is a continuation-in-part of application No. 08/601,374, filed on Feb. 14, 1996, now Pat. No. 5,749,111.

Said application No. 10/059,101 is a continuation-in-part of application No. 09/932,393, filed on Aug. 17, 2001, which is a continuation-in-part of application No. 09/303,979, filed on May 3, 1999, now Pat. No. 6,413,458.

Publication Classification(21) **Appl. No.: 10/784,136**(22) **Filed: Feb. 20, 2004**(51) **Int. Cl.⁷ C08L 53/00**(52) **U.S. Cl. 524/380; 525/271; 525/99****Related U.S. Application Data**

(60) Division of application No. 10/059,101, filed on Nov. 8, 2001, which is a continuation-in-part of application No. 09/303,919, filed on May 3, 1999, now Pat. No.

(57) **ABSTRACT**

Various elastomer materials, cushioning devices, materials for making cushioning elements, and manufacturing techniques are disclosed.

| 3:1 | Average | High Value |
|--------------------|---------|------------|
| Percent Elongation | 1555 | 1620 |
| PSI at Failure | 404 | 492 |

[0417] A consideration of both Example 2, a material having a 5:1 oil to elastomer ratio, and Example 3, a material having a 3:1 oil to elastomer ratio, indicates that a material with a 4:1 oil to elastomer ratio would compare very favorably to the gel disclosed in U.S. Pat. No. 5,508,334, which issued in the name of John Y. Chen. According to Table I in the '334 patent, Chen's 4:1 KRATON® G-1651-containing material had a breaking strength (i.e., tensile strength) value of 4x106 dyne/cm², which translates to only about 58 psi.

[0418] The elongation at break value was mysteriously omitted from Table I of the '334 patent and other Chen patents. However, reference to Table I of Chen's first two issued patents (the '284 and '213 patents) sets the percent elongation of Chen's 4:1 material at about 1700. Applicant suspects that Chen omitted this data in later patent applications because it was either inaccurate or Chen's improved materials failed to exhibit improved properties over his earlier materials.

[0419] In comparison, the percent elongation of a 4:1 example elastomeric gel material for use in the cushions would be at least about 1800, exceeding the elongation of Chen's 4:1 material by about 100% or more. Similarly, the tensile strength of a 4:1 material example for use in the cushions hereof would be at least about 350 psi, and probably in the 370 to 375 psi range. Thus, a example elastomeric gel cushioning medium for use in the cushions with an oil to elastomer ratio of about 4:1 would be about six times as strong as Chen's most example 4:1 gel.

[0420] The following Examples 4 through 11 have been included to demonstrate the usefulness of various plasticizing oils in the example elastomeric gel material.

Example 4

[0421] The material of Example 4 included eight parts of a plasticizer mixture to one part SEPTON 4055. The eight parts plasticizer mixture included about 5.3 parts REGAL-REZ® 1018 and about 2.8 parts DUOPRIME(g) 90 mineral oil.

| 8:1 | Average | High Value |
|--------------------|---------|------------|
| Percent Elongation | 2480 | 2520 |
| PSI at Failure | 187 | 195 |

Example 5

[0422] The material of Example 5 included eight parts of EDELEX® 27 oil to one part SEPTON 4055. EDELEX® 27 has an aromatic content of about 1%, which would be expected to slightly decrease the tensile strength of the material.

| 8:1 | Average | High Value |
|--------------------|---------|------------|
| Percent Elongation | 2105 | 2150 |
| PSI at Failure | 144 | 154 |
| Percent oil bleed | 0.34 | |

Example 6

[0423] The material of Example 6 included eight parts of DUOPRIMEO 55 mineral oil to one part SEPTON 4055.

| 8:1 | Average | High Value |
|--------------------|---------|------------|
| Percent Elongation | 1940 | 2055 |
| PSI at Failure | 280 | 298 |
| Percent oil bleed | 0.29 | |

Example 7

[0424] The material of Example 7 included eight parts of DUOPRIME® 70 mineral oil to one part SEPTON 4055.

| 8:1 | Average | High Value |
|--------------------|---------|------------|
| Percent Elongation | 2000 | 2030 |
| PSI at Failure | 250 | 275 |
| Percent oil bleed | 0.41 | |

Example 8

[0425] The material of Example 8 included eight parts of DUOPRIME® 90 mineral oil to one part SEPTON 4055.

| 8:1 | Average | High Value |
|--------------------|---------|------------|
| Percent Elongation | 2090 | 2125 |
| PSI at Failure | 306 | 311 |
| Percent oil bleed | 0.35 | |

Example 9

[0426] The material of Example 9 included eight parts of DUOPRIME® 200 mineral oil to one part SEPTON 4055.

| 8:1 | Average | High Value |
|--------------------|---------|------------|
| Percent Elongation | 1970 | 2040 |
| PSI at Failure | 200 | 228 |
| Percent oil bleed | 0.20 | |

Example 10

[0427] The material of Example 10 included eight parts of DUOPRIME® 350 mineral oil to one part SEPTON 4055.